100. 34

DRAFT
DNCT/ Steering Committee
Meeting Notes
10:30-4:00
10/27/98

Participants
Elise Holland, Bruce Herbold, Peter Rhoads, Pete Chadwick, Dave Fullerton, Jim White, Gary Stern, Curtis Creel, Jim Snow, BJ Miller, Pete Louie, Art Hinojosa, Dave Briggs, George Barnes, Terry Erlewine, Sushil Arora, Russ Brown, Tom Cannon, Ron Ott, Bob Potter, Patrick Wright

Agenda:
i. Directions from management - assignments for DEFT, DNCT, NoName
ii. Process
iii. Additional Scenarios.

Action Items

- Jim B. and Elise will work on framing hypotheses.
- DEFT to work on scenarios on Thursday **by fleshing out Dave's using his list of needs** (see below)
- Pete R. and Bruce will interact with CMARP and Real-time PWT on real-time monitoring needs for triggers.
- Need for Russ and George to work out how Russ's model outputs will feed into DWRSIM to simulate water supply effects and reservoir feedback to system hydrology.

Highlights
I. Management direction
  II. Concern for uncertainty and technical issues - want us to formulate and state how it effects choice and application of DEFT and NoName tools.
  III. Would be more comfortable with remote monitoring triggers rather than salvage triggers at least in Tier 1 defense.
  IV. Need scenarios.
V. Agreed to work on flushing out Dave's scenario and developing other scenarios from that one.
VI. Management directed us to not worry about baseline and whether our scenarios provided balanced effects; they were more concerned that scenarios should have a scientific basis and are focused on protecting fish and getting ESA assurances.
VII. Agreed that formulating only two scenarios may be too limiting.
VIII. Need to work on biological criteria for restrictions and relaxations.
IX. Dave's sharing rules may be a good starting point for sharing relaxations.

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X. Russ's scenario's tools for relaxing exports were a starting point for gaining water supply.
XI. Dave provided a list for flushing out his scenario.
XII. Russ's model is fine for simulating real-time export restrictions and relaxations, but it overestimates potential water supply impacts - need to use DWRSIM for water supply effects. Also multi year reservoir effects would lead to changes in baseline hydrology, which Russ's model also cannot predict and DWRSIM can.

Management Direction

- Lester wants to know how we are dealing with legitimate uncertainty versus positional uncertainty; or clearly define legitimate scientific uncertainty that defines positional uncertainties based on differences in policy.
- We are to bring to management differences in hypotheses and explain/clarify as to how the differences relates to a choice of DEFT tools.
- Patrick Wright wants to know what Stage 1 Scenarios (two) would do in first seven years and what it will take to get them into place (e.g., may to go to the SWRCB to get standards changes.)
- Bob Potter would like for us to get away from E/I ratios as standards and for protecting fish.
- Wayne White would like us to promote remote monitoring and how we would lay it out. He does not like having to rely on salvage as a trigger to protect fish.
    - We should develop pros and cons for remote monitoring and salvage triggers.
    - We should focus on measures to reduce risk, not just identify risk.
    - We should have a first tier and a fall back position to reduce risk.
    - Each scenario should have risks.
- Wayne would also like to see how much water supply is developed by NoName to see how much room we have to maneuver.
- Management needs to know what we need to make tools real.
    - We need ground rules to come up with a real silver bullet.
    - The smaller the target the better.
- NMFS is confused about whether we are eroding existing conditions for winter run with our suite of proposed DEFT actions/tools.
- The net effects should not be solely through use of credits in an Env Water Acct.
- Need to determine bundles of DEFT and NoName Actions that provide a net benefit to fish and water supply.
- We need to work on how the balance between the two is identified.
- Tier 1 protection could be a balance between DEFT/NoName actions in terms of water supply benefits and costs.
- Tier 2 could be an additional benefit banked in an Env. Water Acct plus other actions.
- We made progress on when we would reduce exports, but not clear on when we would allow relaxations of standards to make up or increase water supply.
- Policy Group needs scenarios with general elements.
- We need to focus on two things:
    - bringing management differences/issues in the form of hypotheses with majority

and minority opinions. **Action**: Jim B. and Elise will work on framing the hypotheses.

- Stage 1 scenarios. **Action**: DEFT to work on these on Thursday.

- CMARP and Real-Time PWT are looking at remote monitoring. **Action**: Pete R. and Bruce will take care of this.
- Entrainment fixes are icing on the cake for common programs.
- Entrainment fixes are important protection in short term (Stage 1).
- Need broad improvement in estuary habitat.

Discussion of Scenarios Topic

1. Elise: Two scenarios is too limiting.
2. Pete R: entrainment is small compared to harvest effects. Jim B will be preparing hypotheses for this. There has been no clear process for expressing minority hypotheses.
3. Pete C: Recommends that we take what Dave F has done and flush it out into a full scenario. And then work off that to make other scenarios. DNCT should work on Dave's scenario this afternoon.
4. Pete R: Agreed that working from Dave's base scenario is a good idea.
5. Dave F: For my scenario we need to define biological triggers for restricting and relaxing exports - when we get credits and when we apply credits. Then we can work these into Russ's model to see how it works.
6. Dave B: Take our list of useful DEFT tools and match them up with the NoName tools.
7. B.J.: Has a problem with Dave's in that he doesn't see where the necessary water will come from for Ag/urban water supply. Relaxations are insufficient to get to an equitable position. Russ's scenario (50% salvage protection fish triggers with dropping E/I standards) provides a source for water supply. We should work off this scenario to make new ones because it shows us how to get the water. We could use Russ's in combination with Dave's.
8. Elise: Why do we have to make up or balance the water in a scenario? There has been no agreement that this is necessary.
9. Bruce: We want scenarios to look different.
10. Dave F: We need to define what represents a scenario.

Dave's Scenario

- The heart of Dave's scenario is the sharing rules: share water whenever there is a relaxation from baseline standards.
- Baseline is a pumping limit of 6680 cfs + 1/3 Vernalis flow for SWP.

11. B.J.: Until we work out details of the restrictions and their water costs, we can't specify what the sharing rules should be to provide a balanced scenario.
12. George: So far the scenario has nothing for water supply.
13. Dave F: Half the new water supply is allocated to water supply.

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14. B.J.: Full AFRP (in-Delta AFRP) requires 175 TAF of new water that we somehow have to make up. Our working assumption was that our baseline did not include the Delta AFRP. Water users want new water supply above the Accord. We should take this out of our baseline.
15. Pete C: We can buy that water and be back to baseline of Accord + Upstream AFRP.
16. Dave F: CALFED would develop the extra water for the Delta AFRP. We could get this water on Day 1/Stage 1 through a water transfer or purchase contract.
17. Bruce H: Baseline is not something we should be discussing - that is for Policy Group.
18. Terry: Agrees that this is something for Policy.
19. Dave B: Reminded us that In-Delta AFRP is not b(2) water.
20. Peter L: If we restrict exports, then we should provide matching relaxation in a scenario.
21. Jim Snow/Pete R: Suggested showing this issue of whether to include In-Delta AFRP in two scenarios - one with and one without.
22. Dave F: the level of baseline exports could be specified in a scenario and could vary with our three baselines.
23. Curtis: Agree that this would show the difference between the baselines.
24. Ron: Regardless of the baseline we need to show improvements. Everyone should improve from Day 1 in our scenarios. Showing different baselines would frame the issue of baselines for Policy.
25. Bruce: Accord + Full AFRP was agreed as only a place to start for us for modeling purposes - not necessary to frame the baseline for Policy.

The meeting then broke for lunch

Ground rules for scenarios:

- start at different bases
- show tradeoffs
- show plus's and drawbacks
- author's don't necessarily have to support all tools in their scenarios.

26. BJ: Each scenario should work for all interest groups.
27. Pete R: Disagrees - that is a policy decision and should not be a limitation set for a scenario.

Input from Policy:

28. Bob Potter: Do not get tangled up in the Delta AFRP conflict. We need to get your scientific opinions on the issues.

29. Patrick Wright: You shouldn't be setting a rigid water supply line. We cannot tie fish benefits to a given level of water supply. Water supply should not drive the level of fish tools applied, the amount of fish tools should be based on env need in order to get the ESA assurances. You should minimize impacts - worry about how to get water supply

even later - don't constrain yourselves with this now.

Back to task at hand:

30. Ron: Ok to develop alternatives that do not meet everyones needs. We should get as close to providing ESA assurances as possible
31. Dave F: Every scenario developed can be modified if necessary to accommodate different water supply lines - no need for us to worry about this now.
32. Bruce: we should go ahead and finish scenarios.
33. George: sees value in packaging tools into scenarios.
34. Bruce: we will develop several scenarios with packages of tools - Policy will fiddle with the knobs to balance.
35. Dave F: Questions whether his scenario will work - it may need additional protection to get closer to ESA needs.
36. Pete C: We should use the process to flush out the scenario to make it acceptable. Right now the scenario doesn't show how to use env water, or how relaxations of standards would occur.

Dave Listed Needs for His Scenario:

i. Biological criteria for restrictions/relaxations
ii. Rules for access to facilities
iii. Well define reasonable relationship between owner of credits and water supply.
iv. Variance from SWRCB of standards, especially if we want an ecomanager.
v. Criteria for crediting - different for credits or debits.
vi. Habitat is there from Common Program
vii. Fail safe actions - emergency credits available to save fish if basic credits have run out. (Tiering of credit system)
viii. Default rules for triggering up or down.
ix. Trial set of rules for relaxation and for using credits
x. Priorities for using credits
xi. Rules for developing or using credits

SWP Pumping Relaxation:

- Base: 6680 cfs + 1/3 Vernalis SJ flow
- Any extra water exported up to E/I standard would be shared 50/50
- Any water exported over the E/I standard would go into Env Account

37. Bruce: Sudden storms are not accounted for in the monthly model. George: this effect could work both ways
38. Russ: suggested that we play out maximum relaxation to see how relaxation would work. Then work at using water for restrictions.

39. Bruce: Russ's model does not reallocate reservoir storage - if exports are restricted it has no means for accounting for any reductions in releases from reservoirs that may occur as a consequence of export restrictions.

Russ's Handout showing potential water supply costs of relaxing E/I and X2:

40. Bruce: We have 17 years of salvage data to help us develop rules for restricting exports. Once developed we can feed these rules into DWRSIM to see the effects on system.
41. George: Relaxed E/I allows us to export more in-stream water - unstored flow, which would keep reservoirs higher and eventually lead more often to fill and spill - which would limit benefits to water supply. Perhaps biggest benefit would be a decreased risk to water supply. Russ's model does not account for this. Real benefits and cost need to be accounted for in DWRSIM.
42. Different levels of demands would also change the historical pattern from which Russ's model works.
43. Can we set protection for rare salmon in fall and winter? Yes - we can set triggers at any level at any time.
44. B.J.: With Russ's fish triggers and relaxation of E/I, he saves 300 TAF which could be shared - with enough water for Delta AFRP, and he reduces salvage losses 15-40%.

Ron on Process:

- The scenario still needs to be fleshed out.
- DEFT needs to provide biol criteria.
- Bring several scenarios to DEFT
- Each scenario does not have to meet all needs, but must identify tools that may meet other goals.
- Each scenario needs to provide ESA assurances.
- Scenarios may apply different tools to protect fish.

45. Pete C: can't do this off the cuff. Need to work on realistic relaxations.
46. Bruce: we can develop several sets of biol triggers for Dave's alternative. Getting water and using water banked are two different questions.
47. George: Russ's approaches doesn't show reservoir effects, which is essential in evaluating benefits to water supply. You could create a hole in San Luis from forgone exports, but you would not know until the next winter whether or not you could refill it. You might use env credits to forgo exports - leaving a hole - but you would have to pay unless the reservoir did not fill. Need rules of how to use the biol part of Dave's new 600 TAF of storage.
48. Dave F: with the baseline set, we need to develop rules for restrictions and relaxations.
49. Bruce: We need to split triggers into periods for smelt and salmon to represent life stage and races. We need to look at multiple years not just the one Russ's model shows.
50. George: We have to be careful of the carryover effects of a multi year approach on reservoirs using Russ's model. Water costs would not be as great as Russ's model would

predict, because reservoirs may fill thus wiping out any debts for forgone exports or increased inflows.

51. Pete C: DEFT should develop biological criteria to complete Dave's alternative.
52. Jim W: Russ's analysis is static density concept (density doesn't change with export rates) - this is a huge leap of faith. Russ's relaxations could trigger additional salvage events (from increased export rates), which are not considered in the model.
53. B.J.: We should extend Russ's scenario to other years to see what the potentials are there. See what eliminating export restrictions (under E/I relaxations only), new triggers to save 50% of salvage (subdivided into seasons, races, and life stages) will do. **Action**: Russ should run all 17 years for his scenario.